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EXAMINER

GRAHAM, GARY K

ART UNIT

PAPER NUMBER

3723

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DELIVERY MODE

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.



## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claims 1-3, 7, 13 and 14 are rejected under 35 U.S.C. 102(a) as being anticipated by Clemans (US patent 6,623,272).

The patent to Clemans discloses the invention, a toothbrush for creating a whitening effect, as is claimed. Clemans discloses a manual toothbrush (11,fig.1) comprised of a hollow handle (23), a cleaning head (13) attached to the handle and having an outer surface (17) with a bristle field (15) thereon. A UV light source (33) is provided in the handle and is coupled to a plurality of emitters (27) provided among the bristle field via "light pipes" (25). The light pipes transmit light from the source (33) to the emitters (27) and can be of any suitable material transparent to light.

With respect to claim 1, Clemans discusses using multiple light pipes (25) each extending from the light source (33) to emitters (27) at different locations (see column 3, lines 35-41) on the head. Clemans also discusses that the light source provides light in the spectrum preferably ranging from 350nm to about 500nm. UVA light is light below 400nm, thus the light source suggested by Clemans is a UV light source.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 4 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Clemans (US patent 6,623,272) in view of Lin (US patent application publication 2004/0053190).

The patent to Clemans discloses the invention substantially as is claimed, as recited above, with the exception of the light source being a UV LED and the light source being actuated by a switch.

Art Unit: 3723

The publication to Lin discloses a toothbrush (10) with whitening effect. Lin discloses using LED's (31) as a light source within the toothbrush (10). Lin discloses that the LED source may emit UV rays, viewable rays and infrared rays. It should be noted that LED's are well known light sources that can emit UV light. Lin also discloses use of a switch (20) on the handle (11) to control operation of the light source.

While Clemans discloses the use of lamps to provide the light, to employ a different well known source such as LED's appears but a mere substitution of one well know light source for another. LED's are well known for their increased efficiency by a reduction in power consumption over lamps. It would have been obvious to one of skill in the art to use a LED as the light source, which provides light in the UV spectrum, for the toothbrush of Clemans, as clearly suggested by Lin and as is well known, to increase the efficiency of the toothbrush.

It also would have been obvious to one of skill in the art to provide a switch on the handle of Clemans, as clearly suggested by Lin, to enable ready operation of the light source within the toothbrush. It is noted that use of switches is well known to enhance ease of operation of electrical devices.

Art Unit: 3723

Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Clemans (US patent 6,623,272).

Clemans discloses all of the above recited subject matter with the exception of the light pipes including fiber optic devices to connect from the light source in the handle to the emitters.

Optical fiber is a well known light transmitting material transparent to visible light. Further, Clemans discloses use of optical fiber (71) to transmit light from an external light source to the emitters. Clemans discloses use of optical fiber as a light transmission element in toothbrushes.

It would have been obvious to one of skill in the art to use or employ optical fiber for the light pipes within the head of Clemans, to provide highly efficient light transmission, as is well established and suggested by Clemans. Use of optical fiber is well established to transmit light and is suggested by Clemans herself. Further, as Clemans suggest that any material can be used for the light pipes, use of optical fiber would be entirely obvious as such is a readily available light transmission element. Use of optical fiber within the head yields the results of efficient light transmission from a readily available element.

### ***Response to Arguments***

Applicant's arguments with respect to claim 1 have been considered but are moot in view of the new ground(s) of rejection. As set forth above, Clemans discloses that a plurality of light pipes can be directed from the light source in the handle to the head along adjacent paths. At the head the light guides may diverge to direct light out of the head at multiple locations among the bristle field. The light source provides light emitted with a spectrum ranging preferably from about 350 nm to about 500 nm, therefore including UVA light.

***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gary K. Graham whose telephone number is 571-272-1274. The examiner can normally be reached on Tuesday to Friday (6:30-4:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph J. Hail can be reached on 571-272-4485. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3723

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Gary K Graham/  
Primary Examiner, Art Unit 3723

GKG  
29 April 2008